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EXAMINER

PROCTOR, JASON SCOTT

ART UNIT

PAPER NUMBER

2123

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/020,033

Applicant(s)

BANKI ET AL.

Examiner

Jason Proctor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/26/02, 6/27/02.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### ***DETAILED ACTION***

Claims 1-31 have been presented for examination. Claims 1-31 have been rejected.

#### ***Priority***

The Examiner acknowledges Applicants' request for priority under 35 U.S.C. § 119(e) to provisional application 60/258999 filed on December 29, 2000.

#### ***Specification***

1. The use of several trademarks, including at least Simula® and Eiffel™, has been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 9 recites the limitation "the logic flow chart" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-2, 12, 14-20, 23, and 28-29 are rejected under 35 U.S.C. 102(a) as being anticipated by US Patent No. 6,063,128 to Bentley et al. (Bentley), provided in IDS dated June 27, 2002.

5. Regarding claim 1, Bentley discloses a computer modeling system (CMS) that provides a logic interface (column 3, lines 50-62), means for converting the constructed logic into object-oriented code (column 4, lines 43-65), means for integrating the object-oriented code with the main simulation system (column 4, lines 50-60), and means for executing the integrated simulation (column 6, lines 4-23 and an inherent feature of compiled C++ code corresponding to the model).

6. Regarding claim 2, Bentley discloses an intended use of the CMS for engineering domains and other domains (column 4, line 66 – column 5, line 10). Monitoring and controlling mechanical facilities is an intended use for a computer modeling system that is functionally equivalent to a particular domain.

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7. Regarding claim 12, Bentley discloses the generation of object-oriented C++ code (column 4, lines 43-65). The limitation that the code is facility management logic code is one of intended use, however Bentley does disclose an intended use of the CMS for engineering domains and other domains (column 4, line 66 – column 5, line 10).

8. Claims 14-16 recite limitations typical to any object-oriented programming language. Bentley discloses support for typical object-oriented programming language concepts (column 12, lines 21-33; column 19, lines 34-43).

9. Claims 17-18 recite steps inherent to the execution of object-oriented code that models a particular process. Bentley discloses object-oriented code that models a problem domain of intended use (column 12, lines 21-33; column 19, lines 34-43; column 4, line 66 – column 5, line 10).

10. Regarding claim 19, Bentley discloses an implementation of the CMS including a plurality of connected processors used to perform the simulation (column 50, lines 26-48).

11. Claim 20 recites the method performed by the computer system of claim 1. As Bentley discloses a CMS that anticipates the system of claim 1, Bentley similarly discloses the method performed by that system.

12. Regarding claim 23, Bentley discloses developing new logic (column 12, lines 21-33).

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13. Regarding claim 28, Bentley discloses the generation of object-oriented C++ code (column 4, lines 43-65).

14. Claim 29 recites limitations typical to any object-oriented programming language. Bentley discloses support for typical object-oriented programming language concepts (column 12, lines 21-33; column 19, lines 34-43).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 3-11, and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bentley as applied to claim 1 above, and further in view of US Patent No. 6,173,438 to Kodosky et al. (Kodosky).

16. Regarding claims 3-6, Bentley discloses that a graphics agent provides a link between a model view and an output device (column 9, lines 53-67). Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a logic flow chart interface.

17. Kodosky teaches a graphical programming system that preferably utilizes the LabVIEW or BridgeVIEW graphical programming systems (column 9, line 54 – column 10, line 3). A suitable graphical programming system is depicted in Fig. 11, including a logical flow chart interface. Kodosky explicitly teaches that LabVIEW comprises a

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graphical data flow diagram (column 15, lines 51-58). It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the LabVIEW graphical interface with the CMS of Bentley in order to provide a seamless environment in which the user can develop a model using high level graphical programming techniques. The combination could be achieved by implemented a LabVIEW graphical interface as the graphical interface disclosed by Bentley.

18. Kodosky discloses the limitations of claims 4-6 via the graphical programming support inherent to the LabVIEW interface (column 15, lines 36-58).

19. Regarding claims 7-11, Bentley discloses that a graphics agent provides a link between a model view and an output device (column 9, lines 53-67). Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a text-based logic code interface.

20. Official notice is taken that a graphical interface including a text-based interface for providing logic code is extremely well known in the art. Such a system is generally referred to as an integrated development environment (IDE).

21. Claims 9-11 recite limitations regarding the generation of object-oriented code and typical features of object-oriented programming. Bentley discloses the generation of object-oriented code and support for typical features of object-oriented programming (column 12, lines 21-33).

22. It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the text-based logic code interface of any well-known

IDE with the CMS of Bentley in order to comply the de facto standard in IDE design. Motivation to do so would be found in the knowledge of a person of ordinary skill in the art. The combination could be achieved by implementing a text-based logic code interface as the graphical interface disclosed by Bentley.

23. Regarding claim 13, Bentley discloses that a graphics agent provides a link between a model view and an output device (column 9, lines 53-67). Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a logic flow chart interface. Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a text-based logic code interface.

24. Kodosky teaches a graphical programming system that preferably utilizes the LabVIEW or BridgeVIEW graphical programming systems (column 9, line 54 – column 10, line 3). A suitable graphical programming system is depicted in Fig. 11, including a logical flow chart interface. Kodosky explicitly teaches that LabVIEW comprises a graphical data flow diagram (column 15, lines 51-58).

25. Official notice is taken that a graphical interface including a text-based interface for providing logic code is extremely well known in the art. Such a system is generally referred to as an integrated development environment (IDE).

26. It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the LabVIEW graphical interface or a text-based logic code interface with the CMS of Bentley in order to provide a seamless environment in which the user can develop a model using high level graphical programming techniques



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or familiar text-based IDE programming techniques. The combination could be achieved by implemented a LabVIEW graphical interface or a text-based logic code interface as the graphical interface disclosed by Bentley.

27. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bentley as applied to claim 20 above, and further in view of US Patent No. 3,971,926 to Gau et al. (Gau).

28. Regarding claims 21-22, Bentley discloses an intended use of the CMS for engineering domains and other domains (column 4, line 66 – column 5, line 10). Bentley does not explicitly disclose modeling a hydrocarbon-bearing subterranean formation of fluid-containing facilities associated with the production of hydrocarbons from the hydrocarbon-bearing subterranean formation.

29. Gau teaches a simulator for a field of intended use including the production of hydrocarbons from a hydrocarbon-bearing subterranean formation (abstract). Gau teaches an interface with numerous controls (Fig. 2) which would be recognized by a person of ordinary skill in the art of computer interface design as directly analogous to graphical user interface controls. Gau teaches the simulation method employed by the simulator (Fig. 7; columns 3-6 in section "The circulation system to be simulated").

30. It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the intended use taught by Gau with the computer modeling system of Bentley in order to produce a simulation of that intended use that benefits from the flexibility of object-oriented programming, as disclosed by Bentley.

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This combination could be readily achieved by implementing the simulation method taught by Gau using the CMS of Bentley, optionally including a graphical interface for the simulation that corresponds to Fig. 2 of Gau.

31. Claims 24-27 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bentley as applied to claim 23 above, and further in view of Kodosky.

32. Regarding claims 24-27, Bentley discloses that a graphics agent provides a link between a model view and an output device (column 9, lines 53-67). Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a constructing a logic flow chart. Bentley clearly discloses a graphical interface for the model, but does not explicitly recite a producing a text-based logic code.

33. Kodosky teaches a graphical programming system that preferably utilizes the LabVIEW or BridgeVIEW graphical programming systems (column 9, line 54 – column 10, line 3). A suitable graphical programming system is depicted in Fig. 11, including a logical flow chart interface. Kodosky explicitly teaches that LabVIEW comprises a graphical data flow diagram (column 15, lines 51-58).

34. Kodosky discloses the limitations of claim 26 via the graphical programming support inherent to the LabVIEW interface (column 15, lines 36-58).

35. Official notice is taken that a graphical interface including a text-based interface for providing logic code is extremely well known in the art. Such a system is generally referred to as an integrated development environment (IDE).

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36. It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the LabVIEW graphical interface and a text-based logic code interface with the CMS of Bentley in order to provide a seamless environment in which the user can develop a model using high level graphical programming techniques or familiar text-based IDE programming techniques. The combination could be achieved by implemented a LabVIEW graphical interface and a text-based logic code interface, selectable via user-configurable option, as the graphical interface disclosed by Bentley.

### ***Conclusion***

Art considered pertinent by the examiner but not applied has been cited on form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (571) 272-3716. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3713.

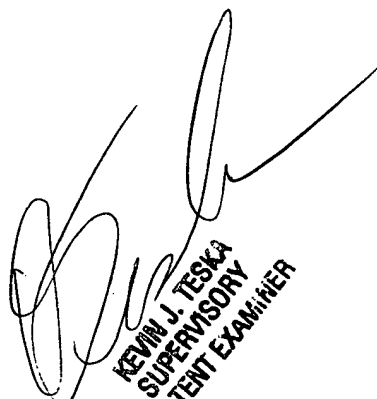
Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information

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Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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